

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A bone grafting composition comprising
  - (i) a bone graft material selected from the group consisting of cancellous bone, de-mineralized bone matrix (DBM) and mixtures thereof, wherein the bone graft material is from about 5% to about 95% by volume of the composition and
    - (ii) a bone graft extender comprising hollow calcium-containing microstructures.
2. (Original) The composition of claim 1, wherein the microstructures are about 0.5 mm to about 6 mm in diameter.
3. (Previously Presented) The composition of claim 1, wherein the bone graft material comprises bone tissues or bone by-products.
4. (Canceled)
5. (Previously Presented) The composition of claim 1, wherein the bone graft material is from about 50% to about 75% by volume of the composition.
6. (Original) The composition of claim 1, wherein the calcium-containing microstructures comprise hydroxylapatite, tribasic calcium phosphate, dicalcium phosphate, tetracalcium phosphate, calcium carbonate, calcium oxide, glass-containing calcium phosphate, or a mixture thereof.
7. (Original) The composition of claim 1, wherein the composition further comprises a bonding agent.
8. (Original) The composition of claim 7, wherein the bonding agent is a polymer.
9. (Previously presented) The composition of claim 8, wherein the polymer is selected from the group consisting of polylactic acid, polyglycolic acid, polycaprolactone, poly  $\alpha$ -hydroxy esters, polyphosphazenes, polyanhydrides, and polypropylene fumarate.
10. (Original) The composition of claim 7, wherein the bonding agent is a calcium-containing cement.

11. (Original) The composition of claim 10, wherein the calcium-containing cement is from about 5% to about 75% by volume of the composition.
12. (Original) The composition of claim 10, wherein the calcium-containing cement is from about 10% to about 50% by volume of the composition.
13. (Original) The composition of claim 10, wherein the calcium-containing cement is calcium phosphate, calcium sulfate or a mixture thereof.
14. (Original) The composition of claim 10, wherein the calcium-containing cement comprises calcium sulfate.
- 15.-43. (Cancelled)
44. (Previously Presented) The composition of claim 1, wherein the calcium-containing microstructures comprise a mixture of at least two or more compounds selected from the group consisting of hydroxylapatite, tribasic calcium phosphate, dicalcium phosphate, tetracalcium phosphate, calcium carbonate, calcium oxide and glass-containing calcium phosphate.
45. (Previously Presented) The composition of claim 1, wherein the hollow calcium-containing microstructures comprise portals.